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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,453	08/26/2003	Leonel A. Barrera	DP-310309	5773
22851	7590	03/01/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			MCCALL, ERIC SCOTT	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			2855	

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/649,453

Applicant(s)

BARRERA ET AL.

Examiner

Eric S. McCall

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**INTEGRATED PRESSURE SENSOR AND CARBON  
CANISTER PURGE VALVE FOR VEHICLE ENGINE**

**FINAL OFFICE ACTION**

In response to the Applicant's amendment dated Dec. 06, 2004.

**CLAIMS**

**35 U.S.C. § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8, 9, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Iochi et al. (5,739,421).

With regards to claim 1, Iochi et al. teach a valve assembly, comprising:

a valve housing (the passageway as pointed to by element 15 which includes the entire passageway between the carbon canister 11 and the engine intake 2) connectable to an intake (2) of an engine and to a carbon canister (11) to selectively establish fluid communication therebetween,

the housing (ie. the entire passageway between the canister and the intake) defining at least one interior cavity (the area within the passageway); and

a pressure sensor (18; col. 3, line 20) interpreted as “supported on the valve housing” because the pressure sensor is mounted on the said passageway and communicating with the cavity, the sensor outputting a signal representative of pressure in the cavity.

With regards to claim 2, Iochi et al. teach the pressure sensor being electrically connected to a computing apparatus (6) on a vehicle supporting the engine.

With regards to claim 3, the conduit connecting the pressure sensor (18) to the valve housing (passageway 15) of the prior art is interpreted as an interior guidance rib formed with an orifice through which the sensor communicates with the cavity as claimed.

With regards to claim 4, the prior art clearly anticipates the claimed subject matter thereof.

With regards to claim 5, Iochi et al. teach a signal being sent to determine the normality of the vent control valve (S8, Fig. 2) which is interpreted as suggesting a processor generating a warning signal if the signal reaches a threshold as claimed.

With regard to claims 8 and 9, Iochi et al. teach a fuel vapor purge system for an engine having an associated fuel tank, an intake, and means for trapping fuel vapor from the fuel tank at least when the engine is not operating, the purge system comprising:

means (the entire passageway, as pointed to by element number 15, between the canister 11 and the engine intake 2) for selectively establishing fluid communication between the trapping means (11) and the intake (2) when the engine is operating; and  
leak sensing means (18) supported on the selectively establishing means for outputting a signal representative of whether a leak exists in the purge system.

With regards to claim 16, Iochi et al. teach a purge valve for an engine fuel vapor recovery system, comprising:

a valve housing (the entire passageway, as pointed to by element number 15, between the canister 11 and the engine intake 2) defining a cavity (the area within the passageway) and holding a valve therein, the valve housing being formed with a carbon canister port connectable to a carbon canister line (11) and an engine intake port connectable to an engine intake line (2);

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a valve in the valve housing and movable between an open configuration, wherein fluid communication between the intake and the canister is established, and a closed configuration, wherein fluid communication between the intake and the canister is not established; and

a pressure sensor (18) supported by the valve housing and communicating with the cavity for generating a signal representative of pressure in the cavity (col. 3, line 20).

With regards to claim 17, the conduit connecting the pressure sensor (18) to the valve housing (passageway) of the prior art is interpreted as an interior guidance rib formed with an orifice through which the sensor communicates with the cavity as claimed.

35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 7, 10-15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iochi et al. (5,739,421).

With regard to claims 6, 7, 10, 14, 15, 18, and 19, the prior art teaches the pressure sensor (18) being enclosed in a sensor housing and the sensor housing supported by the valve housing (the passageway, as pointed to by element number 15, between the carbon canister 11 and the engine intake 2).

However, the prior art fails to explicitly teach the sensor housing on the valve housing or the sensor housing made integrally with the valve housing as claimed.

Nonetheless, it would have been obvious to one having ordinary skill art armed with said teaching to incorporate the sensor housing on the valve housing or to make the sensor housing integrally with the valve housing.

The motivation being that the prior art teaches a direct physical connection between the two housings. Thus, to incorporate one housing on the other housing would not change or alter the operation of the device in any way but instead would allow for a more compact overall design.

With regards to claim 11, the prior art teaches the pressure sensor (18) being electrically connected to a computing apparatus (6) on a vehicle supporting the engine.

With regards to claim 12, the conduit connecting the pressure sensor (18) to the valve housing (passageway 15) of the prior art is interpreted as an interior guidance rib formed with an orifice through which the sensor communicates with the cavity as claimed.

With regards to claim 13, Iochi et al. teach a signal being sent to determine the normality of the vent control valve (S8, Fig. 2) which is interpreted as suggesting a processor generating a warning signal if the signal reaches a threshold as claimed.

*Response to Arguments*

The Applicant's arguments have been considered but have not been found to be persuasive.

With respect to claim 1 (and claims 2-5), the Applicant has argued that the prior art does not teach or suggest that the sensor is supported on the valve housing. The Examiner disagrees. Claim 1 sets forth "a valve housing connectable to an intake of an engine and to a carbon canister to selectively establish fluid communication therebetween, the housing defining at least one interior cavity".

The valve housing as relied upon by the Examiner was indicated by element 15 of the prior art. However, element "15" was used to merely point to that which was interpreted as the valve housing and not an indication of the valve housing as a whole. The "valve housing" as deemed by the Examiner does not just include portion 15, but instead, it was interpreted as including the entire passageway between the carbon canister (11) and the engine intake (2). Thus, the "valve housing" of the prior art connects to the engine intake and to the carbon canister in order to establish fluid communication therebetween as is claimed in claim 1. Furthermore, the



housing defines an interior cavity as claimed, that cavity being the entire area within the passageway between the canister and the intake.

Thus, since the housing is the entire passageway, the pressure sensor (18) of the prior art is supported on the “valve housing” and communicates with the cavity as claimed.

The Examiner has given, as is required, the Applicant’s claims the broadest yet reasonable interpretation, and as such, the Applicant’s claim 1 does not distinguish over the prior art.

With respect to independent claims 8 and 16 (and dependent claims 9 and 17), the Applicant states that the arguments pertaining to claim 1 also apply to amended claim 8 and to claim 16. Thus, the Examiner contends that the above response regarding claim 1 also applies to claims 8 and 16. No further arguments were presented.

Finally, with respect to the Applicant’s arguments pertaining to the rejection under 35 USC 103(a), the Applicant again reiterates the above arguments pertaining to claim 1, and for the reasons presented above, the Examiner has not found the arguments to be persuasive.

### **CONCLUSION**


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric S. McCall whose telephone number is (571) 272-2183.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ERIC S. McCALL  
PRIMARY EXAMINER  
Feb. 24, 2005